

What is claimed is:

1. An interactive entertainment apparatus comprising:

an entertainment device positionable in proximity to animate and inanimate
5 objects;

an acquisition device associated with said entertainment device, said acquisition
device being adapted to acquire a representation of a facial characteristic of an object in
proximity to said entertainment device, and said acquisition device being adapted to
produce a signal relative to the acquired representation; and

10 a processor associated with said acquisition device in a manner to receive the
produced signal from said acquisition device, said processor being adapted to compare
the produced signal relative to data stored in memory and to provide an output signal
indicative of recognition.

15 2. The interactive entertainment apparatus of claim 1, wherein said entertainment device
comprises a toy.

3. The interactive entertainment apparatus of claim 2, wherein said toy comprises a doll
and said acquisition device is mounted to said doll.

4. The interactive entertainment apparatus of claim 2, wherein:

said toy comprises a doll; and

20 said acquisition device includes a camera contained within the head of said doll,
said camera being situated to view objects located in front of the face of said doll.

5. The interactive entertainment apparatus of claim 4, wherein:

said processor is mounted to said doll in a space defined by said doll.

6. The interactive entertainment apparatus of claim 4, wherein:

said doll is a teddy bear; and

said camera is mounted within the head of said teddy bear in a position to view objects through the eye of said teddy bear.

5 7. The interactive entertainment apparatus of claim 1, wherein said entertainment device comprises a video game.

8. The interactive entertainment apparatus of claim 1, wherein:

said acquisition device comprises a camera for acquiring a representation of all objects in proximity to said entertainment device;

10 said acquisition device is adapted to produce a signal relative to the acquired representation of all objects in proximity to said entertainment device; and

said processor is adapted to locate a characteristic portion of said produced signal, the characteristic portion being a portion that corresponds to a facial characteristic of one of the objects in proximity to said entertainment device.

15 9. The interactive entertainment apparatus of claim 8, wherein:

said processor is further adapted to store representations of produced signals received from said acquisition device; and

said processor is adapted to compare a representation of a received signal relative to signal representations previously stored by said processor, to determine whether the received signal corresponds with a previous signal, and, if so, to provide an output signal indicative of recognition.

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10. The interactive entertainment apparatus of claim 9, wherein:

said processor utilizes artificial intelligence to compare signal representations and determine whether the received signal corresponds with a previous signal.

11. An interactive entertainment apparatus comprising:

an entertainment device positionable in proximity to animate and inanimate
5 objects;

an acquisition device associated with said entertainment device, said acquisition device being adapted to acquire a representation of a biometric characteristic of a person in proximity to said entertainment device, and said acquisition device being adapted to produce a signal relative to the acquired representation; and

10 a processor associated with said acquisition device in a manner to receive the produced signal from said acquisition device, said processor being adapted to compare the produced signal relative to data stored in memory and to provide an output signal indicative of recognition.

12. A toy comprising:

15 a camera and digitizer for acquiring a representation of a facial image;

a CPU associated with said camera and digitizer and capable of manipulating signals therefrom;

software resident on said CPU for locating and recognizing said facial images and providing an output signal indicative of recognition.

20 13. The toy of claim 12, wherein:

said toy further comprises a speaker and sound controls whereby sounds produced by said toy may be controlled;

said software is capable of recognizing expressions in said facial images and providing a signal indicative of recognition of said expressions; and

said sound controls are responsive to said signal to modify the sounds produced by said toy in relation to said signal.

5 14. The toy of claim 13, wherein:

said toy further comprises a microphone for the detection of sounds in the proximity of said toy; and

said software is adapted to recognize human speech included in sounds detected by said microphone and to produce signals for controlling the toy in response to
10 recognized human speech.

15 15. The toy of claim 14, wherein:

said sound controls include software controls included in said software, said software controls being adapted to produce synthesized speech; and

said toy further comprises animation controls adapted to control one or more
15 motions of the toy;

said software is capable of recognizing expressions in said facial images and providing a signal indicative of recognition of said expressions; and

said animation controls are responsive to said signal to animate said toy in relation to said signal; and

20 said software is further adapted to produce synthesized speech choreographed with mechanical animation in response to recognition of said facial images and in response to recognition of said expressions.

